

## **Government Agencies Technology Exchange in Manufacturing (GATE-M)**

### **CONFERENCE CALL MEETING SUMMARY July 17, 2003**

#### **Chairman's Remarks**

##### Summary

- Participants:
  - Dan Cundiff, DOD
  - Harvey Wong, DOE EERE
  - Charlie Gaynor, DOE NNSA
  - John Vickers, NASA
  - Dale Hall, NIST (Panel Chair)
  - Dave Stieren, NIST
  - No NSF representatives were able to participate.
- The GATE-M Panel Chair, Dale Hall, communicated that he felt the 2003 GATE-M Interagency Program Review was quite successful, and that he is interested in moving forward to address those areas/actions where GATE-M can produce an impact in the near term.

##### Actions

- *None identified*

#### **Comments/Observations on the Interagency Program Review**

##### Summary

- Following the NIST perspective provided by Dale Hall in his opening comments, each agency representative provided comments about the Program Review. The agencies all felt the Review was successful on a number of different levels, and specific comments are summarized below.
  - The DOD viewed the Review as a positive, successful mechanism by which engineers from across the agencies had a forum to communicate with one another at a technical level. This communication now needs to go beyond “casual conversations.”
    - The DOD felt that the Review was a good investment of time and energy, and it was noted that the DOD is looking very strongly for commercial leverage throughout its technical programs.

- The DOE EERE observed enthusiasm from several of its representatives, including those from the Pacific Northwest National Laboratory. Some dialogue has begun to occur across the agencies in the area of micro-scale systems as a result of the Review.
  - EERE also noted that its photovoltaic (PV) manufacturing program is still looking for the appropriate means of engaging the GATE-M community as it proceeds forward. This PV program involves an industry that is still at the cottage stage of development – not very advanced in terms of a manufacturing technology perspective.
- The DOE NNSA reported that all of its presenters had provided positive feedback about the Review, and this included observations that the Review was the first time that the representatives had participated in an event of this nature.
  - There was specific interest in initiating additional dialogue about the spread spectrum technology that was presented by DOE EERE, as well as supply chain issues presented by DOD.
- NASA reported that its management had been briefed about the Review, and there are already interactions within NASA that have been spawned as a result of the Review in the area of nanotechnology.
  - There has also already been some follow-up with the DOE (Los Alamos and Sandia) in a few areas, including modeling and simulation.

### Actions

- *Each Panel member should facilitate interactions among Review participants within and across the agencies as appropriate, and Panel members should communicate interactions to the Panel as they occur so that such interactions can be documented.*

### **Actions from the Program Review**

### Summary

- NIST reported on the status of the proceedings compilation and dissemination, as well as the posting of this information on the GATE-M website.
  - Proceedings were in the process of being compiled, copied onto CD, and mailed to each Review attendee. The GATE-M agencies also requested that NIST send additional CDs to the Panel principals for distribution within the agencies to other interested parties who may not have attended the Program Review.
  - Review proceedings will be posted on the GATE-M website in early August. The Panel decided that these proceedings should be contained in a password-protected section of the website, with each agency having access.
- Regarding the publication of a report on the Review, NIST took the action to draft a brief report summarizing the occurrence of the Review, along with a few noteworthy highlights. This report would be produced in addition to the technology area-specific white papers/reports that will be generated.
- Regarding publicity about the Review, the following suggestions were made:

- DOE NNSA has already created a blurb that has been forwarded up the NNSA management chain.
- DOD may include a write-up in Defense News, as appropriate.
- NASA may include a write-up in Space News, as appropriate.
- NIST will contact Manufacturing and Technology News about a write-up, as well as perhaps other media outlets (to be determined in conjunction with NIST Public and Business Affairs).
- The Panel decided that each agency should keep its upper management aware of the activities of GATE-M, including the conduct of the Program Review, to keep them generally supportive of the effort.
  - The NIST Director has been briefed about the Review.
  - DOE EERE principals/program managers are aware of the Review, and EERE is awaiting some triggering mechanism/event to further brief its management.
  - DOE NNSA is awaiting opportunities to pursue leads/collaborations, and will continue to keep its management informed.
  - NASA is continuing to develop a high-level awareness of GATE-M within its upper management structure. This has already included the communication of information about GATE-M and the Program Review.
  - The DOD indicated that it is well postured to move forward with raising the level of awareness about GATE-M with upper DOD management. DOD areas of interest within the organization of the Director of Defense Research and Engineering where ties for GATE-M may be considered include the DOD combating terrorism efforts, as well as the National Aerospace Initiative.

### Actions

- *NIST will distribute CDs of the Review proceedings to all attendees as soon as possible. Note that these CDs were mailed by NIST to attendees on July 25.*
- *NIST will send the following additional CDs to the agency principals, per the requests of the principals: DOD-10 copies, DOE EERE-15 copies, and NASA-5 copies. Note that these CDs are being mailed by NIST to the principals during the week of August 4.*
- *NIST will post the Review proceedings on the GATE-M website in a password-protected area as soon as possible after August 4. In conjunction with this web posting, NIST will also distribute access information to the Panel principals, who will in turn disseminate this throughout their respective agencies, as appropriate.*
- *NIST will draft a brief report on the proceedings of the Review, and will circulate this to the Panel for review as soon as possible.*
- *Each Panel member shall ensure that the upper management of the respective agencies remain aware of GATE-M, and will continue to communicate information to that management as activities occur and results are produced.*

## Next Steps for Nano- / Micro-Scale Systems and Technologies

### Summary

- The DOD observed that anything GATE-M can do to speed along the development and availability of technology in this area would grab the attention of the decision makers within the DOD.
- The Panel agreed that establishing a concrete linkage between GATE-M and the National Nanotechnology Initiative (NNI) would be good, and such a linkage should specifically focus on nanomanufacturing.
  - It was discussed that GATE-M should have a major voice in the NNI process with respect to nanomanufacturing, and that something needs to occur in the short term to establish a measure of success for GATE-M.
- The Panel agreed that GATE-M should seek to serve as a consultative committee to the NNI in the area of nanomanufacturing. A major potential function of such a GATE-M Nanomanufacturing Consultative Committee could be to assist the NNI in articulating the NNI “grand challenge” in nanomanufacturing. Such a consultative committee would consist of select, interested technical experts from the various GATE-M agencies.
- The Panel also discussed the merits of GATE-M sponsoring a national nanomanufacturing conference.
- It was determined that the Panel should also produce a report/white paper that details the activities of GATE-M in this area, including highlights and results from the Program Review.

### Actions

- *NIST will contact Dr. Clayton Teague, Director of the National Nanotechnology Coordination Office (NNCO) at the White House Office of Science and Technology Policy, about the notion of a GATE-M consultative committee on nanomanufacturing for the NNI. Dr. Teague is a NIST MEL employee serving a detail to the NNCO. NIST will make this contact as soon as possible and report results to the Panel.*
- *NIST will draft the initial version of the report/white paper for this area for review by the Panel as soon as possible.*

## Next Steps for Intelligence in Manufacturing

### Summary

- The Panel discussed the path forward for GATE-M in this area, noting that this is a path that is not as clear as the one in the nano area. The discussion included the following items:
  - The Panel should continue to engage persons from their organizations who are looking for collaborations, and the Panel should provide any appropriate assistance to facilitate such opportunities.

- The notion of GATE-M providing a web-based forum was raised as a potential vehicle to facilitate collaborative opportunities in this area, to help develop the community in this technical area across the GATE-M agencies, and to exchange ideas.
    - Such a forum could be included on the GATE-M website as a password-protected section.
- It was determined that the Panel should produce a report/white paper that details the activities of GATE-M in this area, including highlights and results from the Program Review.

### Actions

- *NIST will draft the initial version of the report/white paper for this area for review by the Panel as soon as possible.*
- *NIST will create a structure of a web forum for this area for review by the Panel as soon as possible.*

### **Other Next Step Issues**

### Summary

- NIST raised the issue of potential GATE-M joint agency sponsorship for the next iteration of the national manufacturing forum that was planned and conducted by the National Academies in March 2003, and that was sponsored by NIST.
  - There was basic agreement by the agencies participating in the conference call that this was something of interest to the Panel. NIST indicated that for ~\$25K/agency, a contract with the National Academies could be negotiated for the planning, conduct, and follow-up reporting of the event.
  - The idea presented was that the event would be held every other year, with the next event scheduled for the spring of 2005.
  - NIST agreed to serve as the contracting agent on behalf of the GATE-M Panel with the National Academies (because of it having sponsored the 2003 event).
  - Each agency agreed to pursue the issue within its own organization, targeting the need for a commitment in the fall 2003 timeframe.
- NASA briefed the Panel about the Technology Readiness Level Workshop it is conducting in September 2003 in Tysons Corner, VA. John Vickers is one of the organizers. Dan Cundiff from the DOD and Dave Stieren from NIST will both be speaking at the event, which will focus on processes for assessing technology maturity and determining requirements for successful infusion into programs.
- DOD briefed the Panel about the 2003 Defense Manufacturing Conference (DMC), which will be held in Washington, D.C., the week after Thanksgiving. A GATE-M special session is included on the agenda for Monday, December 1, and there is a possibility that a higher-level, plenary session involving executives from government agencies other than the DOD will be included. Dan will be providing the Panel with

additional information describing the GATE-M session as it becomes available, along with potential requests for executive-level GATE-M agency participation.

- NIST briefed the Panel about the manufacturing study that is being conducted by the Department of Commerce International Trade Administration. There is no action here for GATE-M, but Dale Hall wanted to elaborate a bit about the study since he mentioned it during his NIST overview briefing at the June Program Review.
- NIST briefed the Panel, as an information item, about the GATE-M session that will be held at the SAE Aerospace Manufacturing Technology Conference in Montreal in September 2003.
  - John Vickers and Dave Stieren are co-chairing this session, and presentations will be made by John and Dave, as well as Dan Cundiff.
- There was a brief discussion about whether it might be appropriate to create and operate an ad hoc senior advisory group for GATE-M that would consist of senior-level executives from each of the GATE-M agencies and that would serve to provide high-level guidance to GATE-M. This discussion was tabled for re-consideration at a future meeting.

#### Actions

- *Each principal should pursue whatever avenue is necessary to obtain a commitment (or denial) for sponsorship of a national manufacturing forum.*
  - *NIST will seek responses from the agencies in the fall of 2003, after the start of FY04.*
  - *If there are financial issues associated with this action in conjunction with fiscal year ends and beginnings, these issues should be communicated by the agencies to NIST as soon as possible.*
- *Dan Cundiff will communicate details of the GATE-M session at the 2003 DMC to the Panel as soon as they are available, along with potential requests for executive-level GATE-M agency participation.*

#### **Agency Reports**

##### Summary

- Nothing additional was reported.

##### Actions

- None identified.